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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

28 October 1976

MEMORANDUM FOR: The Director of Central Intelligence

FROM : Theodore G. Shackley
Acting Deputy Director for Operations

SUBJECT : MILITARY THOUGHT (USSR): Ways to Increase the Mobility of Control of Tank Troops in a Modern Battle and Operation

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought". This article examines the problem of increasing the mobility of control of tank troops in a modern battle and operation based on materials from a 1963 military science conference of the Military Academy of Armored Troops. It was agreed that there is a need to improve the technical equipment of the troops, to introduce less cumbersome forms, and to automate and mechanize control processes. Suggestions were made for increasing the mobility of control by shortening the time for organizing reconnaissance. Requirements for technical means of control of tank troops were formulated according to reliability, speed, and security of communications. The conferees set standards for the construction and equipping of command-staff vehicles, and discussed measures to increase the survivability and mobility of control posts. This article appeared in Issue No. 2 (72) for 1964.

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2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned

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Theodore G. Shackley

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TOP SECRET

# Intelligence Information Special Report



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COUNTRY USSR

DATE OF INFO. Mid-1964

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SUBJECT

MILITARY THOUGHT (USSR): Ways to Increase the Mobility of Control of Tank Troops in a Modern Battle and Operation

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 2 (72) for 1964 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is Colonel L. Chernov. This article examines the problem of increasing the mobility of control of tank troops in a modern battle and operation based on materials from a 1963 military science conference of the Military Academy of Armored Troops. It was agreed that there is a need to improve the technical equipment of the troops, to introduce less cumbersome forms, and to automate and mechanize control processes. Suggestions were made for increasing the mobility of control by shortening the time for organizing reconnaissance. Requirements for technical means of control of tank troops were formulated according to reliability, speed, and security of communications. The conferees set standards for the construction and equipping of command-staff vehicles, and discussed measures to increase the survivability and mobility of control posts.

End of Summary

Comment: 50X1-HUM

The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970. 50X1-HUM

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Ways to Increase the Mobility of Control of Tank Troops in a Modern Battle and Operation
(Based on materials of a military science conference of the Military Academy of Armored Troops)
by
Colonel L. Chernov

In December 1963 a military science conference was held in the Military Academy of Armored Troops.

The main report on the topic "Ways to Increase the Mobility of Control of Tank Troops in a Modern Battle and Operation" was given by General-Leytenant of Tank Troops P. A. Markov.

The report of General-Mayor of Communications Troops Kh. S. Lubkin was devoted to technical means of control of tank troops.

In the reports and speeches of the participants in the conference it was noted that one of the reasons for the insufficiently mobile control of troops is the imperfection of the structure of control organs and posts. They are still not very mobile and not adapted for work under the conditions of highly maneuverable combat actions. With the modern rates of advance, the control posts do not manage to relocate behind the troops in a timely manner. This is explained by the fact that they are "overgrown" with a large number of cumbersome communications means (heavy radio sets, secure communications equipment, etc.) which are not sufficiently adapted to providing control of troops on the move.

Therefore, the solution of the problem of increasing the mobility of control at the present time greatly depends not only on improving the style and methods of work, but also on improving the means of control on the basis of the newest technical achievements.

Improvement of the methods of control must above all take the path of shortening the periods of time for gathering and processing situation data. Along with fuller use of communications means, automation and mechanization of the processes of control, it is necessary to change the system of passing and the methods of processing and generalizing situation data. It is desirable to transmit the most important data directly to the staff of

the tank army and simultaneously to the appropriate command level. The volume and content of reports should also be radically changed. They should be as short and clear as possible, which can be achieved with the help of standardized forms.

For purposes of introducing order into the passage of information, it was suggested that the entire flow of it be divided (according to importance and urgency) into categories of priority, and that a firm system of letter designators be established or that documents be made on paper of a corresponding color.

One of the ways to increase the mobility of control, in the opinion of Colonel Rimskiy-Korsakov, is to shorten the time for organizing reconnaissance. He indicated that methods still persist where the organization of reconnaissance begins only after the commander has made the decision and set the tasks for reconnaissance, and the tasks are assigned to the immediate executors after approval of the reconnaissance plan. Instructions to organize reconnaissance must be given by the commander right after clarification of the task. Planning reconnaissance and assigning reconnaissance tasks to the executors must represent a single process to be carried out in the shortest possible times.

In the interests of increasing the mobility of control of reconnaissance, in a number of cases it is desirable for the chief of intelligence to be located not where the commander is but where he can personally organize the actions of the reconnaissance organs, command them, and receive data on the enemy in a timely manner.

For quick receipt of information about the enemy and reporting of reconnaissance information to all the levels concerned, it is necessary, in the opinion of the participants in the conference, that the chiefs of intelligence of the tank regiments, divisions, and armies have at their disposal control vehicles with such means as would provide communications for the chief of intelligence of the regiment with the reconnaissance groups, with the chiefs of staff of the battalions, the chief of intelligence of the division, and the commander and chief of staff of the regiment; for the chief of intelligence of the division -- with the reconnaissance groups and the commander of the separate reconnaissance battalion, the long-range reconnaissance groups and the commander of the long-range reconnaissance company, the commander of the radio and radiotechnical reconnaissance company, with the chiefs of intelligence of the regiments and the intelligence officers of the division who are located at the command post, with the chief of intelligence of the tank army and

the chief of staff of the divison; for the chief of intelligence of the tank army -- with the commander of the SPETSNAZ company and the special-purpose reconnaissance groups, the commander of the separate OSNAZ radio battalion, the chiefs of intelligence of the divisions, the staff of the rocket troops and artillery of the army, and the intelligence officers located at the command post of the army, and with the commander and chief of staff of the army.

In addition, all the chiefs of intelligence must have radio receivers to receive data on the enemy from the aircraft supporting the troops of the army and from the aircraft conducting tactical aerial reconnaissance, and the chief of intelligence of the army, besides this, must have another radio receiver to receive data from operational aerial reconnaissance aircraft.

The participants at the conference in their speeches stressed that an important technical problem for tank troops is to develop improved navigational equipment which would be not only a means of driving the individual vehicles but mainly a means of controlling tank units and subunits. Such equipment would automatically take the coordinates of the commanders' vehicles and on demand (or according to schedule) transmit them by radio to the superior commander, on whose map board the location of the subordinate commanders must be reflected. Some colleagues said that such navigational equipment, in view of its complexity, can be used only in command-staff vehicles, beginning with the battalion and up. Therefore, to receive data on the location of the tanks of the commanders of companies and platoons, Engineer Captain Shagin recommended a radiotechnical method, the basis of which is the use of phase rangefinders with active response and time-division multiplexing. Calculations show that the suggested method would allow the time for receiving information on the location of subunits of the regiment to be shortened to one-half or one-third, and would reduce the flow of information on the radio nets by 30 percent. Thus the collection of information about the position of vehicles would be fully automated, and the reliability of information and the security of the transmission of information would be considerably increased.

In the opinion of most of the officers who spoke, one of the main questions on which increasing the mobility of control depends is shortening the time spent by the commander in making a decision. In the main report and in the speeches a number of suggestions were expressed relating to the improvement of methods of making the decision and transmitting the tasks to the troops. In particular it was suggested that all the work in making the decision, planning the operation of the tank army, and transmitting the

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tasks to the troops be carried out by a special planning group headed personally by the commander of the army. The necessary data from the chiefs of the branch arms and services must come in to the commander over the staff internal selective-circuit communications. To make a decision and draw it up in this case, as the experience of the 7th Tank Army shows, takes three and a half to four hours. Colonel Skvortsov, Lieutenant Colonel Chernov and others who spoke said that the greatest saving of time is ensured by such a method when making the decision, drawing it up, and transmitting the tasks to the troops constitutes a single, unbroken process. Disturbance of this procedure often comes about because of the insufficiently clear organization of work in the staff or the inefficient distribution of functional duties among the officers, and also in those cases where transmitting the tasks to the troops is made to depend on the total completion of planning and working out of combat documents.

At the conference were formulated the most important demands made on the technical means of control of tank troops as to their reliability, speed, dependability, and security of communications.

The medium and high-power radio sets of the tank troops must operate faultlessly for 200 to 300 hours. In the opinion of General-Mayor of Communications Troops Lubkin, to ensure continuous control of the troops, the average time for restoring disrupted communications must be shortened to 10 to 15 minutes.

The most important demand made on the technical means and the communications system is speed. Therefore, the information about the enemy means of employing nuclear weapons must be collected, processed, and given to the commander of the division in one and a half to two minutes, and about the position and nature of actions of the first-echelon battalions, in ten minutes.

The necessity for increasing the security of communications is conditioned by the power of the means of neutralization and the growing capabilities of all types of reconnaissance, especially radio reconnaissance. In this connection, the basic directions for increasing the speed and security of communications, in the opinion of the participants in the conference, may be: wider use of high-speed, ultrahigh-speed, and automatic secure communications equipment, use of signal-coding communications, and reduction of the flow of information by introducing new technical means.

Together with this, the means of control of tank troops must possess such features as the capability of ensuring reliable communications on the move, limited size and weight that permit placing the equipment in armored command-staff vehicles, and ease of servicing.

Colonel Serobab spoke about the necessity of increasing the jamming resistance and extending the operating range of the radio sets employed in the missile units of the tank army, and of setting up a special radio net to control the fire of rocket troops. The lack of communications between the army missile brigade and the front mobile missile technical base, and also between the chiefs of artillery armament of the tank divisions and the army mobile missile technical base has a bad effect on the organization of the delivery of missiles. As the experience of exercises shows, it is not uncommon to have to hunt for units for hours to deliver missiles to them.

It was further noted that the means and methods existing at the present time for assessing the results of nuclear strikes (visual observation and aerial photography) cannot satisfy the requirements of the staffs. There is now a need for special radiotechnical complexes linked to electronic computers. These complexes must determine the parameters of nuclear bursts within the limits of the range of fire of the tactical and operational-tactical missiles that are in service with a tank army and its divisions.

The participants in the conference reached a common opinion about the fact that command-staff vehicles must be armored, highly maneuverable, amphibious, equipped with means of protection against nuclear attack, and also with means that allow establishing communications at any ranges necessary in practice for a given control level. As for the transporting base, in the opinion of the communications officers, the command-staff vehicle at the regiment, division, and army levels must be on wheels. The experience of exercises shows that the same radio sets mounted on wheel-type armored personnel carriers provide considerably greater ranges of communications than on track-types. Certain colleagues supported having wheeled command-staff vehicles at the army level, but having vehicles on tracks in the tank divisions and regiments. This will ensure relocating the control posts immediately behind the battle formations of the advancing units. Besides this, in tank divisions and armies, all communications vehicles, especially radio and radio-relay stations and the equipment rooms of telephone and telegraph stations must be based on the armored personnel carrier.

There was also talk of the necessity of having specially equipped control tanks or command tanks; five or six in an army, three or four in a division, and two in a regiment. With the availability of such tanks, formation and large unit commanders with their staff officers will be able to successfully negotiate zones with rather high levels of radioactive contamination and continuously control troops both when they are negotiating these zones and after they have left one. Accordingly, these tanks must be introduced not in place of command-staff vehicles, but in addition to them.

Many colleagues who spoke noted that, in the newly adopted organizational structure of the field headquarters of a tank army, the gap between the peacetime and wartime T/O&E has been basically eliminated. This is the main condition for ensuring the constant combat readiness of the control organs of tank large units, which has decisive significance for the successful conduct of combat actions in case of the sudden outbreak of war. Further improvement of the structure of the field headquarters of the tank troops must proceed along the lines of increasing the mobility of control posts, reducing the number of assigned personnel immediately subordinate to the commander of the army, introducing means of automation and mechanization and transition in the final analysis to an integrated automated system of troop control.

As for control posts, the participants in the conference noted that here it is necessary to work on solving the problems of increasing their survivability and mobility. This can be achieved not only by dispersal and concealment of their work and movement, but mainly by accommodating them in armored command-staff vehicles, and also by ensuring their protection against means of mass destruction and by organizing security and defense. The system of control posts accepted at the present time may ensure stable troop control during the operations of a missile/nuclear war. However, as experience shows, it would be better if the forward command post and command post were uniform in their make-up. Now, by virtue of its small size, the forward command post cannot fully replace the command post when it is put out of operation. And transferring control to the command post of one of the divisions or to the rear control post (if the control posts of the army are put out of operation) does not ensure control of troops, inasmuch as these posts do not have the necessary forces and means.

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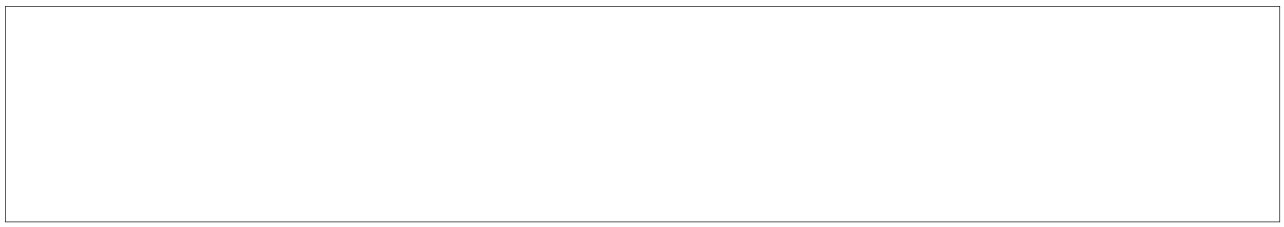

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